REMARKS/ARGUMENTS

This is in response to the Office Action dated April 9, 2008. Claims 9-15 are pending. Claims 12-15 stand rejected in the outstanding Office Action. Claims 9-11 are withdrawn. Claim 13 has been editorially amended.

Applicant thanks the Examiner for consideration of the Information Disclosure Statements filed March 25, 2005.

The Examiner's acknowledgment of the application's claim to foreign priority and receipt of a certified copy of the priority document is appreciated.

The rejection of claims 12-15 under 35 U.S.C. § 103(a), as allegedly being unpatentable over Mitsuyoshi (JP 2000-227606) in view of Takashi (JP 2002-040426) is respectfully traversed.

Mitsuyoshi generally discloses an LCD device which offers high reflectance operation ([0013]). The device (Figs. 1 and 2) comprises a pair of LCD panels, which may have the same or different types of LC layers. In a typical operation, for example when the LC layer is the same for both panels, the LC is such that it exhibits selective reflection of incident light ([0014]). In other words, the LC layer will reflect, for example, clockwise circular incident light but will not reflect counter-clockwise circular incident light. The counter-clockwise circular light is then transmitted through the first (top) LCD panel and it is incident onto a phase difference plate R1 which changes the phase of the incident light so that its polarization becomes clockwise. After reflection of this light from the second (bottom) LC layer, the reflected light is transmitted again through the phase difference plate, has its polarization changed back to counter-clockwise, and finally is transmitted through the first (top) LC layer. In this way, all light is made to be

reflected by the LCD device, thus resulting in high reflectance ([0034]-[0035]).

The above device can be modified so that it yields 3D displays. In the 3D mode, the LC layer of the first (top) panel reflects clockwise circular light, and the LC layer of the second (bottom) panel reflects counter-clockwise circular light ([0036]). In addition, a different image is displayed in the first and second LCD panels. Then, with the above arrangement, the picture of the LCD element of the first layer is visible to the right eye and the picture of the element of the second layer is visible to the left eye. When an observer is equipped with a viewing device (e.g., glasses) having an appropriate right-handed-rotation circular light transmission filter and a left-handed-rotation circular light transmission filter, then a 3D picture can be seen.

The Examiner acknowledged that Mitsuyoshi fails to disclose "one of (a) the display-use liquid crystal panel and (b) the switching liquid crystal panel being provided closer to a light source than the other, a liquid crystal layer in said one of (a) the display-use liquid crystal panel and (b) the switching liquid crystal panel having a transition point higher than that of a liquid crystal layer in the other". He then turned to Takashi for the missing limitation.

Takashi generally discloses a D-STN liquid crystal display device comprising a driving cell 30 and a compensation cell 40 (Fig. 1). The liquid crystal material for the two cells is such that the driving cell has a liquid crystal material having a higher phase transition temperature than the liquid crystal material of the compensation cell. The Examiner then concluded that it would have been obvious to one of ordinary skill in the art to modify the liquid crystal panel of Mitsuyoshi according to Takashi in order to prevent the fall of the contrast ratio by a rise in heat without providing a temperature compensation circuit.

It is respectfully submitted that Takashi only discloses that a phase transition temperature of the liquid crystal layer in the driving cell is set higher than that of the liquid crystal of the

compensation cell for the purpose of preventing the coloring of a liquid crystal display which occurs when the temperature around a liquid crystal display device changes.

The compensation cell of Takashi may be provided on either the incidence side or the emission side of the light of the driving cell. Therefore, when the compensation cell is provided on the incidence side of the light of the driving cell, a liquid crystal layer in a liquid crystal cell closer to a light source has a transition point higher than that of a liquid crystal layer in the other. On the contrary, however, when the compensation cell is provided on the emission side of the light of the driving cell, a liquid crystal layer in a liquid crystal cell closer to a light source has a transition point lower than that of a liquid crystal layer in the other.

In contrast, according to an exemplary embodiment disclosed in the present application "one of (a) the display-use liquid crystal panel and (b) the switching liquid crystal panel being provided closer to a light source than the other, a liquid crystal layer in said one of (a) the display-use liquid crystal panel and (b) the switching liquid crystal panel having a transition point higher than that of a liquid crystal layer in the other", regardless of whether the liquid crystal panel closer to the light source is a display-use liquid crystal panel or a switching liquid crystal panel. That is, when the liquid crystal panel closer to the light source is the display-use liquid crystal panel, then the liquid crystal layer of the display-use liquid crystal panel has a transition point higher than that of the liquid crystal layer in the switching liquid crystal panel; when the liquid crystal panel closer to the light source is the switching liquid crystal panel, then the liquid crystal layer of the switching liquid crystal panel has a transition point higher than that of the liquid crystal layer in the display-use liquid crystal panel.

The above arrangement is required in the exemplary embodiment disclosed in the present application because of the use of a light source of high light intensity so as to prevent a decrease

in efficiency in the used light. When a light source of high light intensity is used, a liquid crystal panel closer to the light source is affected by the heat from the light source and tends to easily increase its temperature. This causes several problems, including the exceeding of a guaranteed operating temperature T1 of the liquid crystal panel closer to the light source due to the effect of the heat from the light source, when the liquid crystal layers of the display-use liquid crystal panel and the switching liquid crystal panel have the same transition point, even if an ambient temperature is equal to or lower than the guaranteed operating temperature T1 of the liquid crystal panel. This problem is solved by adapting the claimed arrangement.

In addition, Mitsuyoshi fails to teach or suggest "a switching liquid crystal panel which switches between 2D display and 3D display by enabling or disabling an effect of the parallax barrier", or "a parallax barrier which attains a 3D effect by giving a certain viewing angle to the display image at a time of 3D display", as required by claims 12-15. In Mitsuyoshi's LCD device, the device is configured for 2D operation or 3D operation, but not both. As described above, in the normal mode of operation (both LC layers having identical reflective properties), 2D mode is achieved. Only when the two LC layers have different reflective properties and the two LCD panels display different scenes and external special glasses are used, 3D operation is possible. In other words, Mitsuyoshi lacks a switching liquid crystal panel that switches between 2D and 3D operation by enabling an effect of the parallax barrier. None of the two LCD panels in Figs. 1, 2 is a switching LCD panel. Furthermore, none of the two LCD panels enables or disables an effect of the phase difference plate R1, which is not a parallax barrier. A parallax barrier is typically an element that has an array of effective light-transmitting regions and effective light-shielding regions. The phase difference plate R1 of Mitsuyoshi is a simple phase shifter, not a parallax barrier.

For the above reasons, claims 12-15 are allowable.

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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